Amendments to the Claims

Please cancel Claims 2, 3, 5, 14, 15 and 17. Please amend Claims 1, 4, 6, 13, 16, 18 and 25. Please add new Claims 26-31. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (currently amended) A digital cross connect comprising:

plural switching stages, each stage having plural switches receiving plural frames of time multiplexed input data and switching the data in time and space;

a frame counter at each switch synchronized to a frame clock; and

a master switch within the plural switching stages from which ~~the~~ a frame clock is propagated to downstream switches and from output switches to input switches, propagation of the frame clock being matched to data distribution between the switches with the frame clock being derived from a frame of data, each switch selecting between an external frame clock input and a propagated frame clock derived from one of plural frames of data.

2-3. (canceled)

4. (currently amended) A cross connect as claimed in claim [[3]] 1 wherein the frame clock is ~~derived from~~ propagated to downstream switches in an A1 byte of a SONET frame.

5. (canceled)

6. (currently amended) A cross connect as claimed in claim [[5]] 1 wherein the frame counter of each switch is aligned to a defined offset from the selected frame clock.

7. (original) A cross connect as claimed in claim 6 wherein a switch selects between one of plural redundant frame clock inputs propagated from the master switch, each with a respective defined offset.

8. (original) A cross connect as claimed in claim 1 wherein a switch frame counter is aligned to a defined offset from the frame clock.

9. (original) A cross connect as claimed in claim 8 wherein a switch comprises multiple frame counters having different alignments.

10. (original) A cross connect as claimed in claim 9 wherein each switch includes two frame counters.

11. (original) A cross connect as claimed in claim 9 wherein a single switch module implements portions of two stages of the cross connect using respective frame counters.

12. (original) A cross connect as claimed in claim 1 wherein the master switch is in a middle stage.

13. (currently amended) A method of providing a digital cross connect comprising:

providing plural switching stages, each stage having plural switches which receive plural frames of time multiplexed input data and which switch the data in time and space;

propagating a frame clock from a master switch within the plural switching stages to downstream switches and from output switches to input switches, propagation of the frame clock being matched to data distribution between the switches with the frame clock being derived from a frame of data; and

synchronizing a frame counter at each switch to ~~the propagated~~ a frame clock, each switch selecting between an external frame clock input and a propagated frame clock derived from one of plural frames of data.

14-15. (canceled)

16. (currently amended) A method as claimed in claim ~~15~~ 13 wherein the frame clock is ~~derived from~~ propagated to downstream switches in an A1 byte of a SONET frame.

17. (canceled)

18. (currently amended) A method as claimed in claim ~~17~~ 13 wherein the frame counter of each switch is aligned to a defined offset from the selected frame clock.

19. (previously presented) A method as claimed in claim 18 wherein a switch selects between one of plural redundant frame clock inputs propagated from the master switch, each with a respective defined offset.

20. (original) A method as claimed in claim 13 wherein a switch frame counter is aligned to a defined offset from the frame clock.

21. (original) A method as claimed in claim 20 further comprising generating plural frame counters at a switch, each frame counter aligned to a different offset from the frame clock.

22. (original) A method as claimed in claim 21 wherein each switch includes two frame counters.

23. (original) A method as claimed in claim 21 wherein a single switch module implements portions of two stages of the cross connect using respective frame counters.

24. (original) A method as claimed in claim 13 wherein the master switch is in a middle stage.

25. (currently amended) A digital cross connect comprising:

plural switching stages, each stage having plural switching means for receiving plural frames of the time multiplexed data and switching the data in time and space;

frame counter means at each switch for providing a frame count synchronized to a frame clock; and

master switch means within the plural switching stages for propagating the frame clock to downstream switches and from output switches to input switches, propagation of the frame clock being matched to data distribution between the switches with the frame clock being derived from a frame of data, each switch selecting between an external

frame clock input and a propagated frame clock derived from one of plural frames of data.

26. (new) A digital cross connect comprising:

plural switching stages, each stage having plural switches receiving plural frames of time multiplexed input data and switching the data in time and space;

multiple frame counters at each switch synchronized to a frame clock, each frame counter being aligned to a defined offset from the frame clock and the multiple frame counters having different alignments; and

a master switch within the plural switching stages from which the frame clock is propagated to downstream switches and from output switches to input switches, propagation of the frame clock being matched to data distribution between the switches.

27. (new) A cross connect as claimed in claim 26 wherein each switch includes two frame counters.

28. (new) A cross connect as claimed in claim 26 wherein a single switch module implements portions of two stages of the cross connect using respective frame counters.

29. (new) A method of providing a digital cross connect comprising:

providing plural switching stages, each stage having plural switches which receive plural frames of time multiplexed input data and which switch the data in time and space;

propagating a frame clock from a master switch within the plural switching stages to downstream switches and from output switches to input switches, propagation of the frame clock being matched to data distribution between the switches; and

synchronizing plural frame counters at each switch to the propagated frame clock, each frame counter being aligned to a different defined offset from the frame clock.

30. (new) A method as claimed in claim 29 wherein each switch includes two frame counters.

31. (new) A method as claimed in claim 29 wherein a single switch module implements portions of two stages of the cross connect using respective frame counters.